

**ABSTRACT****ARRAY DEVICE WITH SWITCHING CIRCUITS**

An array device has switching circuits in each pixel for selectively routing one of at least two inputs to a pixel element. Switching transistors are connected between a respective one of the at least two inputs and the pixel element. The timing of the operation of the switching transistors is determined in dependence on the data waveform of at least one of the inputs, and a capacitive connection is provided between the gate of at least one of the switching transistors and an output of the switching transistor. This enables a reduction in the data voltage range which is required to ensure that the switching transistors switch correctly, by using a bootstrapping technique. In particular, by controlling the timing of application of the data signals for switching on or off the switching transistors, the voltage levels of at least one of the input signals can be used to provide capacitive coupling through the respective switching transistor onto the bootstrapping capacitor.

[Fig.12]